

WHAT IS CLAIMED IS:

1. A packaging unit for an optical fiber array having a planar lightwave circuit (PLC), comprising:

5 an optical fiber array;

a housing having peripheral sides with inner and outer side walls, said optical fiber array being fixed in said housing, and said housing having first and second slots formed on respective peripheral sides so as to face each other, each of the first and second slots having open ends so that the inner and outer side walls of
10 the housing are in communication with each other; and

first and second boots inserted in the first and second slots, respectively, wherein an optical fiber of the optical fiber array is inserted through the first and second boots, to fix the optical fiber lengthwise.

15 2. The packaging unit of claim 1, wherein the first boot is sized to receive a single optical fiber and has a cylindrical portion secured in the first slot, a conical portion extended from the cylindrical portion and positioned outside the housing, an opening formed along the center of the cylindrical and conical portions in the length direction, for receiving the single fiber, and an engaging portion
20 extended perpendicularly from the cylindrical portion.

3. The packaging unit of claim 1, wherein the second boot is sized to receive a ribbon optical fiber, the second boot having a planar portion secured in the second slot, a tapered portion extended from the planar portion and positioned outside the housing, an opening formed along the center of the planar and tapered portions in the length direction, for receiving the ribbon fiber, and an engaging portion extended perpendicularly from the planar portion.

4. The packaging unit according to claim 1, wherein the first boot is sized to receive no more than a single optical fiber.

5. The packaging unit according to claim 1, wherein the optical fiber array include a Planar Lightwave Circuitry (PLC) chip, and an input fiber block at an input side of the PLC chip, and an output fiber block at an output side of the PLC chip.

6. The packaging unit according to claim 1, wherein the optical fiber array is fixed in the housing with an adhesive.

7. The packaging unit according to claim 1, wherein the first and second boots are affixed in their respective slots with an adhesive.

8. The packaging unit according to claim 1, wherein the first and second slots are sized to retain the first and second boots.

9. The packaging unit according to claim 1, wherein the first and
5 second boots have respective engaging portions, each respective engaging portion being arranged substantially perpendicular to a lengthwise direction of the respective first and second boots.

10. The packaging unit according to claim 9, wherein the respective
10 first and second slots each have a portion substantially perpendicular to a lengthwise direction of the first and second boots to receive the respective engaging portion of the respective first and second boots.

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11. A packaging unit for holding an optical fiber array, said packaging unit comprising:

a housing having peripheral sides with inner and outer side walls so as to hold the optical fiber array in said housing, and said housing having first and second
5 slots formed on respective peripheral sides so as to face each other, each of the first and second slots having open ends so that the inner and outer side walls of the housing are in communication with each other; and

first and second boots inserted in the first and second slots, respectively, wherein an optical fiber is inserted through the first and second boots, to fix the
10 optical fiber lengthwise.

12. The packaging unit of claim 11, wherein the first boot is sized to receive a single optical fiber and has a cylindrical portion secured in the first slot, a conical portion extended from the cylindrical portion and positioned outside the
15 housing, an opening formed along the center of the cylindrical and conical portions in the length direction, for receiving the single fiber, and an engaging portion extended perpendicularly from the cylindrical portion.

13. The packaging unit of claim 11, wherein the second boot is sized to receive a ribbon optical fiber, the second boot having a planar portion secured in the second slot, a tapered portion extended from the planar portion and positioned outside the housing, an opening formed along the center of the planar and tapered portions in the length direction, for receiving the ribbon fiber, and an engaging portion extended perpendicularly from the planar portion.

14. The packaging unit according to claim 11, wherein the first boot is sized to receive no more than a single optical fiber.

15. The packaging unit according to claim 11, wherein the first and second boots are affixed in their respective slots with an adhesive.

16. The packaging unit according to claim 11, wherein the first and second slots are sized to retain the first and second boots.

17. The packaging unit according to claim 11, wherein the first and second boots have respective engaging portions, each respective engaging portion being arranged substantially perpendicular to a lengthwise direction of the respective first and second boots.

18. The packaging unit according to claim 17, wherein the respective first and second slots each have a portion substantially perpendicular to a lengthwise direction of the first and second boots to receive the respective engaging portion of the respective first and second boots.

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19. A method for housing an optical fiber array in a packaging unit, said method comprising the steps of:

(a) forming a housing having peripheral sides with inner and outer side walls so as to hold the optical fiber array in said housing, and said housing having
10 first and second slots formed on respective peripheral sides so as to face each other, each of the first and second slots having open ends so that the inner and outer side walls of the housing are in communication with each other;

(b) arranging an optical fiber array in said housing; and

(c) inserting the first and second boots in the first and second slots,
15 respectively, wherein an optical fiber is inserted through the first and second boots, to fix the optical fiber lengthwise.

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20. The method according to claim 19, wherein the first boot is sized to receive a single optical fiber and has a cylindrical portion secured in the first slot, a conical portion extended from the cylindrical portion and positioned outside the housing, an opening formed along the center of the cylindrical and conical portions
5 in the length direction, for receiving the single fiber, and an engaging portion extended perpendicularly from the cylindrical portion.